Midwifery 64 (2018) 77–84

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/locate/midw

Early labour experience questionnaire: Psychometric testing and women's experiences in a Swedish setting

Karin Ängeby, RN, RM, PhD student[a,b,*], Ann-Kristin Sandin-Bojö, RN, RM., Associate Professor[b], Mona Persenius, RNANIC, Assistant Professor[b], Bodil Wilde-Larsson, RNT, Professor[b,c]

[a] Women's department and Centre for Clinical Research, County Council of Värmland, Karlstad, Sweden
[b] Department of Health Sciences, Faculty of Health, Science and Technologies, Karlstad University, Karlstad, Sweden
[c] Department of Health studies, Inland Norway University of Applied Sciences, Elverum, Norway

ARTICLE INFO

Keywords:
Early Labour
Psychometric test
Factor analysis
Questionnaire
Early Labour Experience

ABSTRACT

Objective: (a) to psychometrically test the Early Labour Experience Questionnaire (ELEQ) among both primi- and multiparous women giving birth in a Swedish setting, and (b) to describe and compare their experiences during early labour in relation to background characteristics.
Design: a cross-sectional study.
Setting: a county in Sweden.
Participants: primi- and multiparous women with a spontaneous onset of labour after gestational week 37 + 0. In total, $n = 1193$ women were invited, and $n = 754$ responded the questionnaire, with a final total of $n = 344$ primi and $n = 410$ multiparous women.
Methods: the ELEQ was translated with cross-cultural adaptation. The validity was determined using exploratory factor analysis with principal axis factoring analyses. Reliability was estimated from the internal consistency using Cronbach's alpha. The relationship between the questionnaire and the demographic characteristics of the participating women were analysed using ANOVA and *t*-test.
Findings: an explorative factor analysis showed a three-factor solution for primiparas women (SWE-ELEQ-PP) consist of 23 items and a stable factor structure that explained 49.2% of the total variance with sufficient reliability coefficients (0.81–0.86). A four-factor solution for multiparous women (SWE-ELEQ-MP) consist of 22 items, with 52.62% of the total variance explained and with adequate internal consistency reliability coefficients (0.77–0.86) for three factors and relatively low stability (0.62) for the fourth factor with two items. Primiparous women scored significantly higher on items about feeling confused, and significantly lower on some items measuring emotional wellbeing and perceptions of midwifery care compared to multiparous women. Primiparous women with longer early labour (>18 h), scored significantly lower on the perceptions of midwifery care. Primi- and multiparous women who were dissatisfied with their telephone conversation or with not being admitted during early labour, scored significantly lower on emotional wellbeing, higher regarding emotional distress, and significantly lower about perceptions of midwifery care.
Key conclusions: the SWE-ELEQ-PP and SWE-ELEQ-MP are considered valid questionnaires for use in a Swedish setting. Differences exist between parity and the factor structure and experiences in early labour vary. Women less content with early labour management decisions rated perceived midwifery care lower regardless of parity.
Implication for practice: the questionnaire can be used to evaluate early labour care in a Swedish setting. The result suggests that differences according to parity exist and should be addressed when managing early labour care and a more individualised approach requires considerations.

Introduction

In the western world, early labour is often a period of childbirth women manage with no or intermittent help from health professionals (Carlsson et al., 2009; Eri et al., 2015; Green et al., 2012; Ängeby et al., 2015). In the medical literature, labour is based on a theoretical concept. The first stage of labour is divided into two phases, a latent and an active phase, based on time parameters and cervical dilatation with measurement to determine normality (Hanley et al., 2016). The latent phase is sometimes called early labour, when viewed from women's perspective. Women do not express labour as occurring in stages or phases,

* Corresponding author at: Department of Health Sciences, Faculty of Health, Science and Technologies, Karlstad University, Karlstad, Sweden.
E-mail addresses: karin.angeby@liv.se, karin.angeby@kau.se (K. Ängeby).

https://doi.org/10.1016/j.midw.2018.06.008
Received 12 February 2018; Accepted 10 June 2018

and consider the description of labour phases as an abstract concept (Dixon et al., 2013). For some women, the period of early labour is prolonged. One study found that 23% of women planning a vaginal birth experience a latent phase of 18 hours or more (Ängeby et al., 2018). Research has also shown that women admitted to the hospital in early labour are more often subjected to medical interventions (Bailit et al., 2005; Janssen et al., 2016; Mikolajczyk et al., 2016). To avoid unnecessary medical interventions, clinical guidelines recommend that women in early labour should not be admitted to the hospital until active labour is established (Nunes et al., 2014; Zhang et al., 2010).

A study from US showed that women's confidence prior to labour onset was the strongest predictor of confidence while giving birth. It also found associations between measured covariates of individual and clinical encounters and self-reported confidence, however less significant, that included race/ethnicity, partner support, and mode of birth (Attanasio et al., 2014). The duration of labour, both very short and very long, are associated with a negative emotional experience (Stadlmayr et al., 2004). The authors suggest that the subjective latent phase must be included when giving birth, since women already experience themselves as being in labour also during the early phase.

Questionnaires that measure experiences of childbirth care have been developed (Sawyer et al., 2013a). The outcome of labour is most often measured in terms of the mode of birth, obstetrical interventions, and the wellbeing of the new-born baby. However, increasing attention is being paid to research about the labour experience, often described as multidimensional (Christiaens and Bracke, 2007; Hodnett, 2002). A review of the experience of labour care, states that measurers of childbirth experience do not always differentiate between the labour experience in terms of emotions and the experience of labour care perceived during labour and birth (Sawyer et al., 2013a).

To assess primiparous women's affective experiences and satisfaction with early labour care, Janssen and Desmarais (2013a) developed The Early Labour Experience Questionnaire (ELEQ) in a Canadian setting (Janssen and Desmarais, 2013a). The questionnaire was psychometric tested, and three factors were identified: emotional wellbeing, perceptions of nursing care, and emotional distress. The ELEQ was used in a randomised study with primiparous women, comparing support by telephone or support at home during early labour (Janssen and Desmarais, 2013b). The result showed that women who had support at home rated perceptions of nursing care more positively than those receiving telephone support, but no significant differences were found regarding emotional wellbeing and emotional distress (Janssen and Desmarais, 2013b).

In countries where hospital births are the norm, the organisation of childbirth care struggles with caring for women who are not in established labour, and many women experience a long period of labour outside of the hospital setting (Janssen et al., 2009). It is important for childbirth care organisations, to receive valid feedback from women about their experiences of care when evaluating labour care quality. Multiparous women's experience of early labour care has been sparsely examined (Janssen and Desmarais, 2013a). A review of validated instruments regarding women's childbirth experience, rates the ELEQ questionnaire as suitable but suggested that additional testing would further strengthen the questionnaire (Nilvér et al., 2017). The ELEQ is the only valid questionnaire, to our knowledge, measuring early labour care, but it was validated exclusively in a Canadian setting and specifically for primiparous women. When using a questionnaire in a new context, it is essential to perform a psychometric test (Sawyer et al., 2013b).

Method

Aim

The aim was (a) to psychometric test the Early Labour Experience Questionnaire among primi- and multiparous women giving birth in a Swedish setting, and (b) to describe and compare their experiences during early labour in relation to background characteristics.

The Early Labour Experience Questionnaire and background characteristics

Permission to translate and use the Early Labour Experience Questionnaire (ELEQ) was obtained from the constructor (Janssen and Desmarais, 2013a). The ELEQ measures women's affective experiences during early labour. An exploratory factor analysis presented three factors: emotional wellbeing (8 items), emotional distress (6 items) and perceptions of nursing care (8 items) and four single items. The items are rated on a 5-point Likert scale, from 1 "yes definitely" to 5 "not at all". Cronbach's alpha ranged from 0.80 to 0.87, indicating good internal consistency (Janssen and Desmarais, 2013b).

Background characteristics were age, parity, gestational week, educational level, country of birth, and mode of delivery. Early labour experience was added in terms of questions concerning hours in labour prior to admittance, telephone contacts and visits to the labour ward during early labour, and satisfactions during these contacts.

Translation procedure

In the present study, the ELEQ was translated into Swedish in five steps, by a modified version as described by Beaton et al. (2000). Before the translation process one item was removed *"Would you recommend this type of early labour care to a friend?"* since no other option was available in the county. First, forward translation of the questionnaire from English to Swedish was performed by one bilingual person (RNM, Ph.D.) outside the research group. During this step, the translator made notes and comments to highlight challenging phrases or uncertainties. Second, the authors analysed the translated version and the comments made by the translator. The version was scrutinised thoroughly, discussed, and a Swedish version were formulated. All items phrased *"When you were in early labour at home, did the nurse…"* were changed to, *"did the midwife…* "and clarifying words were added "*When you were in early labour at home and had telephone contact or was on a visit before admittance, did the midwife…"* to adapt to the Swedish childbirth organisation with a midwife responsible for care at the labour ward as there is no opportunity for home visits. Third, another bilingual person (RN, PhD student), unfamiliar with the original version and outside the research group translated the questionnaire back to English. Fourth, the research group analysed and compared the translations and no further adjustments were needed. Finally, a Swedish version containing 25 items was established. Response alternatives were rated on a 5-point Likert scale, from 1 "yes definitely" to 5 "not at all" and a "not applicable" alternative.

Pilot testing

The Swedish version was pilot tested by 30 women who had recently given birth (they were not involved in the present study). The women answered the questionnaire, and after each item expressed if it was difficult to understand the question or it the question was ambiguous. No changes were implemented after the pilot test.

Procedure and participants

A cross-sectional survey was carried out in a county in Sweden for one year (September 1, 2013, through August 31, 2014). During this period, pregnant women were informed about the study by their midwife during their visits for antenatal care. Eligible women received both oral and written notice by the responsible midwife at the hospital, and asked for consent to obtain the questionnaire after birth. Those who gave informed consent, received the questionnaire, 2 –3 months after birth.

Inclusion criteria were: women with spontaneous onset of labour after gestational week 37 + 0 and an understanding of written Swedish. The participating women could choose between postal or web-based